

**Figure 1**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 00h	cy_version[7:0]	cy_cmd[7:0]		
N + 04h	cy_len[15:0]		cy_req_id[15:0]	
N + 08h	cy_adr[31:0]			
N + 0Ch	cy_data[31:0]			

**Figure 2**

Size (Byte)	Name	Description
1	cy_cmd[7:0]	Coyote Command (when LSB = 1, it's a write action; when LSB = 0, it's a read action):  04h: REG_RD      Register Read 05h: REG_WR      Register Write 06h: CFG_RD      Configuration Read 07h: CFG_WR      Configuration Write 09h: ACTION      Action Command others:            Reserved
1	cy_version[7:0]	Coyote Command Header Version. Must be 01h.
2	cy_req_id[15:0]	This field is the Coyote Request ID generated by the host. The Coyote Device copies this value in the corresponding Coyote Answer's Acknowledge ID.
2	cy_len[15:0]	Number of valid data bytes transferred in the data field. Must be in multiples of 2 bytes. Max:0020h, Min:0002h
4	cy_adr[31:0]	On a REG_RD, REG_WR, CFG_RD and CFG_WR commands, this register refers to the address of the data being requested or provided. On an ACTION command, this field is specific to the type of action.
4	cy_data[31:0]	On a REG_WR and CFG_WR commands, this field refers to the data being provided. On an ACTION command, this field is specific to the type of action.

**Figure 3**

Action Type	Description	Port
0000h	Get Device Info	CMD
001Ch	Image Trigger	DATA
001Dh	Resend Image Packet	DATA
2004h	Module Reset	CMD
Others	Reserved	N/A

**Figure 4**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 08h	Reserved		cy_acttype[15:0] = 0000h	

**Figure 5**

Size (Byte)	Name	Description
2	cy_acttype[15:0]	Action Type = 0000h: Get Device Info.

**Figure 6**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 08h	Reserved		cy_acttype[15:0] = 0000h	
N + 0Ch	vendor_id[7:0]		model_id[15:0]	
N + 10h	mac_a1[7:0]	mac_a0[7:0]	soft_maj[7:0]	soft_min[7:0]
N + 14h	mac_a5[7:0]	mac_a4[7:0]	mac_a3[7:0]	mac_a2[7:0]
N + 18h	ip_adr[31:0]			
N + 1Ch	Reserved		multicast[15:0]	

**Figure 7**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 08h	Reserved		cy_acttype[15:0] = 001Ch	
N + 0Ch	trig_ctrl[31:0]			

**Figure 8**

Size (Byte)	Name	Description
2	cy_acttype[15:0]	Action Type = 001Ch: Image Trigger.
4	trig_ctrl[31:0]	Data to be written in the Ethernet register Trigger Register (TRIGGER).

**Figure 9**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 08h	cy_pkt_id[15:0]		Cy_acttype[15:0] = 001Dh	
N + 0Ch	cy_im_id[31:0]			
N + 10h	cy_im_adr[31:0]			

**Figure 10**

Size (Byte)	Name	Description
2	cy_acttype[15:0]	Action Type = 001Dh: Resend Image Packet.
2	pkt_id[15:0]	Packet ID requested to be resent.
4	image_id[31:0]	Image ID requested to be resent.
4	image_adr[31:0]	Image Address. Must be equal to cy_im_id[31:0] + cy_pkt_id x cy_len.

**Figure 11**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 08h	Reserved		cy_acttype[15:0] = 2004h	

**Figure 12**

Size (Byte)	Name	Description
2	cy_acttype[15:0]	Action Type = 2004h: Module Reset.

**Figure 13**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 00h	cy_status[7:0]	cy_cmd[7:0]		
N + 04h	cy_len[15:0]		cy_ack_id[15:0]	
N + 08h	cy_adr[31:0]			
N + 0Ch	cy_data[31:0]			

**Figure 14**

Size (Byte)	Name	Description
1	cy_cmd[7:0]	<p>Coyote Command (when LSB = 1, it's a write action; when LSB = 0, it's a read action):</p> <p>04h: REG_RD      Register Read  05h: REG_WR      Register Write  06h: CFG_RD      Configuration Read  07h: CFG_WR      Configuration Write  09h: ACTION      Action Command  others:            Reserved</p>
1	cy_status[7:0]	<p>Coyote Status.</p> <p>Bit 0: Error occurred when '1'.  Bit 1: Reserved; Always '0'.  Bit 2: Reserved; Always '0'.  Bit 3: Reserved; Always '0'.  Bit 4: Reserved; Always '0'.  Bit 5: Reserved; Always '0'.  Bit 6: System Reset occurred when '1'.  Bit 7: Device Reset occurred when '1'.</p>
2	cy_ack_id[15:0]	This field is the Coyote Acknowledge ID and has the same ID value than the Coyote Command's Request ID received previously.
2	cy_len[15:0]	Number of valid data bytes transferred in the data field. Max:0020h, Min:0002h
4	cy_adr[31:0]	On a REG_RD, REG_WR, CFG_RD and CFG_WR commands, this register refers to the address of the data being requested or provided. On an ACTION command, this field is specific to the command.
4	cy_data[31:0]	On a REG_RD and CFG_RD commands, this field refers to the data being provided. On other commands, this field has no meaning.

**Figure 15**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 00h	cy_status[7:0]	cy_format[7:0]		
N + 04h	cy_vd_len[15:0]		cy_pkt_id[15:0]	
N + 08h	cy_im_id[31:0]			
N + 0Ch	Cy_time[31:0]			
N + 10h	N x cy_data[31:0]			

**Figure 16**

Size (Byte)	Name	Description
1	cy_format[7:0]	Coyote Data Format: 00h: Image Raw others: Reserved
1	cy_status[7:0]	Coyote Status. Bit 0: Error occurred when '1'. Bit 1: Last Data Packet when '1'. Bit 2: Resend Packet when '1'. Bit 3: Reserved; Always '0'. Bit 4: Reserved; Always '0'. Bit 5: Reserved; Always '0'. Bit 6: Reserved; Always '0'. Bit 7: Reserved; Always '0'.
2	cy_pkt_id[15:0]	Sequential Packet ID. Starts at zero at the beginning of every image.
2	cy_vd_len[15:0]	Valid Data Length. Number of bytes of valid data included in cy_data. This field doesn't include any padding data. When zero, valid data length is unknown.
4	cy_im_id[31:0]	Image ID.
4	Cy_time[31:0]	Timestamp information. Provides the ability to identify, in time, the source of the packet. Can also be used to synchronize multiple video streams.
32 x N	cy_data	Data. Must in multiple of 32 bytes.

**Figure 17**

Adr. Offset	Byte 3	Byte 2	Byte 1	Byte 0
N + 00h	cy_status[7:0]	cy_cmd[7:0]		
N + 04h	cy_len[15:0]		cy_irq_id[15:0]	
N + 08h	Reserved		cy_irq_type[15:0]	
N + 0Ch	N x cy_data[31:0]			

**Figure 18**

Size (Byte)	Name	Description
1	cy_cmd[7:0]	Coyote Command: 0Ah: IRQ           Interrupt Request / Enable 0Bh: IACK        Interrupt Acknowledge others:           Reserved
1	cy_version[7:0] / cy_status[7:0]	Coyote Command Header Version (from the host): must be 01h.  Coyote Status (from the device): Bit 0: Error occurred when '1'. Bit 1: Reserved; Always '0'. Bit 2: Reserved; Always '0'. Bit 3: Reserved; Always '0'. Bit 4: Reserved; Always '0'. Bit 5: Reserved; Always '0'. Bit 6: Reserved; Always '0'. Bit 7: Reserved; Always '0'.
2	cy_irq_id[15:0]	On an IRQ, this field is the Coyote Interrupt ID generated by the device. On an IACK, this field is the Coyote Acknowledge ID and has the same ID value than the Coyote Command's Interrupt ID received previously.
2	cy_len[15:0]	Number of valid data bytes transferred in the data field. Max:0020h, Min:0000h
2	cy_irq_type[15:0]	Coyote Interrupt Request Type: 003Ch: HW0       Hardware 0 Interrupts. others:           Reserved  Coyote Interrupt Enable Type: 0038h: HW0       Hardware 0 Interrupts. others:           Reserved
2	Reserved[15:0]	Reserved. Always '0'.
N x 4	cy_data[31:0]	Data related to interrupt type.

Figure 19

